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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,939	01/19/2001	Benjamin Glade Johnson	7536.103	7573

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EXAMINER

SCHAETZLE, KENNEDY

ART UNIT	PAPER NUMBER
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3762

DATE MAILED: 04/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/765,939

Applicant(s)

JOHNSON ET AL.

Examiner

Kennedy Schaetzle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: the indefinite article "a" is missing prior to the word "second" on line 7. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 the first, second, third and fourth independent current sources must be positively recited. At present it is not clear whether the means for providing a plurality of independent electrical current sources is intended to include the recited first, second, third, and fourth current sources, or whether said current sources are intended to be distinct therefrom. The examiner will assume the former. To avoid any ambiguity, the examiner suggests reciting after line 2 that the means for providing a plurality of independent electrical current sources further comprises first, second, third and fourth independent electrical current sources, and then replacing the second occurrence of the word "a" with the word "said" on lines 3, 6, 11 and 15. Like comments apply to independent claims 10 and 20.

Claim 2 is vague. It is not clear if the recited beat frequency on line 3 of claim 2 refers back to the first or the second interferential beat frequency discussed in claim 1. If the applicants are not intending to refer back to any one interferential beat frequency in particular, then it is suggested that the word "a" be used instead of the word "the" prior to the word "beat." Related comments apply to claims 3 and 21.

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In claim 8, reference to "...the current providing means..." lacks antecedent basis. It is suggested that the applicants refer to "current source providing means" to eliminate any confusion.

In claim 20, on lines 4 and 5, "...the voltage range..." lacks antecedent basis.

Also in claim 20, it is unclear how one can provide a plurality of *circuits* from a source *current*. The examiner will assume that one is referring to a current path established by a circuit rather than a circuit itself. Correction and/or clarification is requested.

In claim 22, the reference to "...the first frequency varying means..." lacks antecedent basis.

Also in claim 22, the phrase "...that varies pulse..." is vague and indefinite. It would appear that a noun is missing after the word "pulse" such as "amplitude," "duration," "frequency," etc..

In claim 26, for consistency purposes, the examiner suggests inserting the word "interferential" prior to the word "beat."

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, 4, 7, 10, 12-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansjurgens (Pat. No. 3,774,620).

In reference to claim 1, Hansjurgens discloses the use of a means for providing a plurality of independent electrical current sources (elements 2 and 3), and a first pair of treatment electrodes 23, 24, coupled to a first independent electrical current source (the circuitry generally referred to by element 2, and more specifically oscillator 21) capable of establishing a circuit path operating at a first frequency when attached to a patient, and a second pair of treatment electrodes 33, 34, coupled to a second independent

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electrical current source (the circuitry generally referred to by element 3, and more specifically oscillator 31) capable of establishing a second circuit path operating at a second frequency different than the first frequency when attached to a patient, to establish a beat frequency between the first and second circuit paths.

Regarding the use of third and fourth electrode pairs and third and fourth current sources, Hansjurgens teaches that the disclosed system is not limited to two independent current sources, but that the system may incorporate more than two circuits with the choice being one of design dependent upon the area of treatment and the type of surface under treatment (col. 3, lines 1-7). Given this teaching, those of ordinary skill in the art desiring to enhance treatment effectiveness for the particular application at hand, would have seen the obviousness of employing an additional third and fourth pair of treatment electrodes coupled to third and fourth independent electrical current sources.

Regarding the particular frequency relationships recited, the applicants are only claiming that the third and fourth pair of treatment electrodes be *capable* of providing operation in this manner. By analogy, one can say a computer is capable of running software for calculating the orbit of Saturn around the Sun, even if the actual computer itself doesn't have the software loaded into its system. In any event, since the current sources are disclosed as being independent of one another, the examiner considers the third and fourth electrode pairs to be capable of operating as set forth in the present application.

6. Claims 1-5, 7, 8, 10-15, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemec (Pat. No. 4,153,061).

A similar line of reasoning made in the rejection based on the Hansjurgens reference applies here as well in regards to the particular frequency relationships set forth and the interpretation of the word "capable." Nemec teaches that the invention can be readily extended to include more than two carrier frequencies. Such extension would naturally result in the addition of extra oscillators, modulators and electrode pairs in a pattern replicating the building block circuits shown in Fig. 1.

Regarding claims 2 and 8, the examiner considers the modulators and the low-frequency oscillators for generating f1 and f2 frequencies to represent frequency varying means capable of varying the frequency during treatment.

Regarding claim 4, the electrode pairs of Nemec are considered capable of establishing a circuit path operating at a first frequency of generally 1850 Hz. As disclosed, the carrier frequencies may range from 1 kHz to 10 kHz.

7. Claims 6, 9, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemac as applied to claims 1-5, 7, 8, 10-15, 17 and 18 above, and further in view of Madsen Jr. et al..

Regarding claim 6 and claims with similar limitations, the examiner considers the display of frequency of use and elapsed time of use for the device to be synonymous with a display of frequency of use and elapsed time for each of the plurality of current sources since the current sources are all either on or off at the same time.

8. Claims 20-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nemac in view of Madsen, Jr. et al..

Once again regarding independent claim 20, a similar line of reasoning made in the rejection based on the Hansjurgens reference applies here as well in regards to the particular frequency relationships set forth and the interpretation of the word "capable."

Regarding claim 20 specifically, although Nemec does not discuss the use of a CPU to control voltage and current parameters, the use of CPUs to enact control over electronic device operation in the medical arts is old and well-known by artisans of ordinary skill. Madsen, Jr. et al., for example, disclose an interferential current treatment device that employs a microcontroller for allowing the operator to modify the operating parameters of device operation, and gives a host of benefits to such an arrangement (note for example col. 1, lines 12-54). Any artisan desiring to take advantage of the benefits outlined by Madsen, Jr. et al. would have seen the obviousness of including the ubiquitous CPU in the device of Nemac.

Regarding claims 27 and 28, the examiner wishes to elaborate that the device of Nemac is in the very least *capable* of such operation.

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Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McGraw et al. discloses an interferential current stimulator that incorporates a CPU and LCD display for allowing individual control of channel intensity and the display of a variety of significant parameters of operation.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kennedy Schaetzle whose telephone number is (703) 308-2211. The examiner can normally be reached on M-F from 9:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (703) 308-5181. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3590 for regular communications and (703) 308-0758 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

KJS
April 20, 2003


KENNEDY SCHAETZLE
PRIMARY EXAMINER